

### TYPICAL PLAN LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX



SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

APPROVED  
September 2014  
DATE

/S/ Ahmet Demirebilek  
STATE ELECTRICAL ENGINEER

FHWA

**Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Option 1)****References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols

[Standard Spec. 655](#) Electrical Wiring

[Standard Spec. 675](#) Controllers and Detectors

**Bid items associated with this drawing:**

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
652.0800	Conduit Loop Detector .....	LF
653.0100 - 0150	Pull Boxes Steel (inch) .....	EACH
653.0151 - 0179	Pull Boxes Non-Conductive (inch) .....	EACH
655.0700	Loop Detector Lead In Cable.....	LF
655.0800	Loop Detector Wire .....	LF

**Standardized Special Provisions associated with this drawing:**

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

**Other SDDs associated with this drawing:**

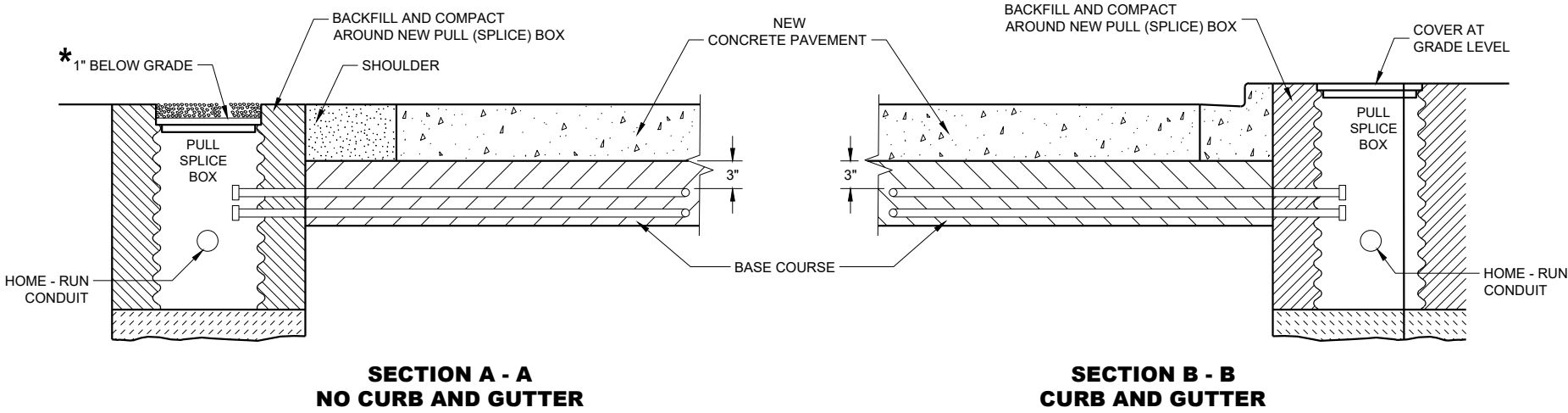
<a href="#">SDD 9B2</a>	Conduit
<a href="#">SDD 9B4</a>	Pull Box
<a href="#">SDD 9B16</a>	Pull Box Non-Conductive

**Design Notes:**

NONE

**Contact Person:**

Ahmet Demirbilek (414) 220-6801  
(414) 322-9606 (Mobile)



\* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

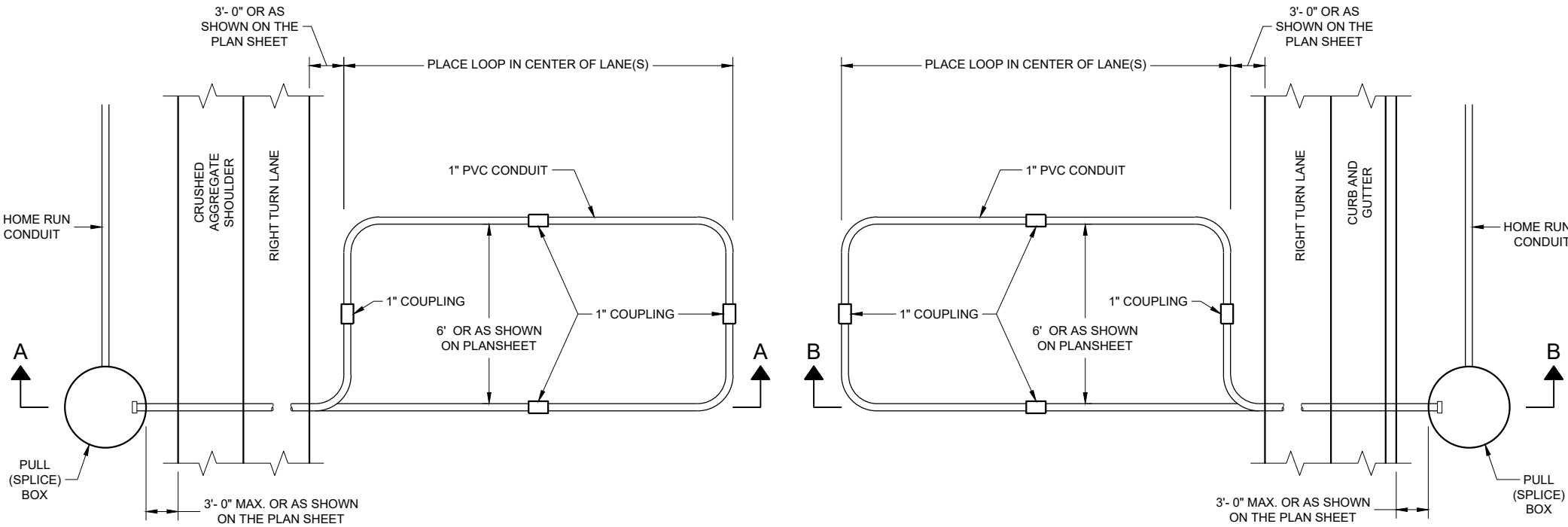
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

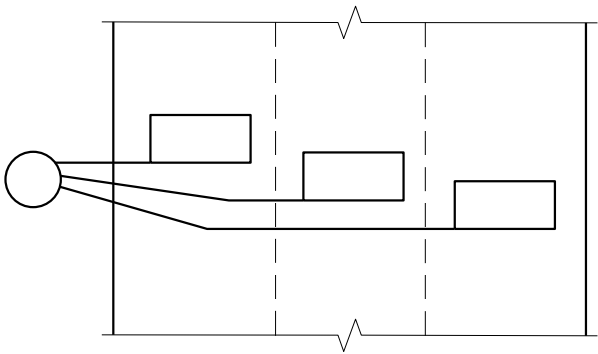
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

**Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Option 2)****References:**

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[Standard Spec. 675](#) Controllers and Detectors

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**Standardized Special Provisions associated with this drawing:**

<u>STSP NUMBER</u>	<u>TITLE</u>
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**Other SDDs associated with this drawing:**

<a href="#">SDD 9B2</a>	Conduit
<a href="#">SDD 9B4</a>	Pull Box
<a href="#">SDD 9B16</a>	Pull Box Non-Conductive

**Design Notes:**

NONE

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